

WHAT IS CLAIMED IS:

1. A semiconductor device comprising a plurality of semiconductor elements, a plurality of switching elements, a plurality of drive lines for driving the
5 switching elements, and a plurality of signal lines for reading out an electric charge detected by the semiconductor elements provided on an insulating substrate, the semiconductor device further comprising a redundant wiring which forms a plurality of crossings
10 with at least one of the drive lines and the signal lines and is electrically insulated from the at least one of the drive lines and the signal lines at each crossing.

15 2. The device according to claim 1, wherein when a breaking exists in at least one of the drive lines and the signal lines, the broken line and the redundant wiring are electrically connected at the crossing thereof.

20 3. The device according to claim 2, wherein the broken line and the redundant wiring are electrically connected by irradiating the crossing with a laser.

25 4. The device according to claim 1, comprising a pad on at least one of the drive lines and the signal lines.

5. The device according to claim 2, wherein the broken line and the redundant wiring are electrically connected by applying a voltage therebetween.

5 6. The device according to claim 1, wherein the redundant wiring is connected to a reference potential.

10 7. The device according to claim 6, wherein the reference potential is a ground potential.

8. The device according to claim 2, wherein the electrical connection is effected in the crossing to fix the potential of the broken line.

15 9. The device according to claim 1, wherein a semiconductor layer is formed between the drive lines and the redundant wiring or between the signal lines and the redundant wiring, at the crossings.

20 10. A semiconductor device comprising, on an insulating substrate, a semiconductor element comprised of a first electrode layer, an insulating layer, a first semiconductor layer, an n^+ -type semiconductor layer, and a second electrode layer, and a switching
25 TFT comprised of a gate electrode layer, a gate insulating layer, a second semiconductor layer, and an ohmic contact layer, and having a drive line for

driving the switching TFT and a signal line for reading out an electric charge detected by the semiconductor element, the device further comprising a redundant wiring, wherein the redundant wiring forms a plurality of crossings with at least one of the drive line and the signal line and the crossings are each comprised of the insulating layer, the first semiconductor layer and the n⁺-type semiconductor layer or the gate insulating layer, the second semiconductor layer and the ohmic contact layer.

11. A radiation detection device comprising a common electrode, an energy converter for converting a radiation directly into an electric charge, a plurality of electrodes for collecting the electric charge converted by the energy converter, capacitors for storing the collected electric charge, and TFTs for reading out the stored electric charge, the device further comprising:

data signal lines for reading out the stored electric charge;

gate drive lines connected to the TFTs; and

a redundant wiring having a plurality of crossings with at least one of the data signal lines and the gate drive lines.

12. The device according to claim 11, wherein the

energy converter comprises amorphous selenium or GaAs.

13. A radiation detection device having the semiconductor device as set forth in claim 1.

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14. The device according to claim 13, comprising a wavelength converter.

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15. A radiation imaging system comprising:
the radiation detection device as set forth in claim 13;

signal processing means for processing a signal from the radiation detection device;

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recording means for recording a signal from the signal processing means;

display means for displaying a signal from the signal processing means;

transmission processing means for transmitting a signal from the signal processing means; and

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a radiation source for generating the radiation.